IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application. An identifier indicating the status of each claim is provided.

Listing of Claims

1. (Currently Amended) A transmitting apparatus for providing digital content, comprising:

meta information storing means for storing meta information about content data that is transmitted;

identifier data associated with a particular portion of the content data that is adapted to distinguish a segment of content data;

meta information schema storing means for storing a meta information schema that defines the data structure of meta information about the content data according to the content data that is transmitted;

inference rule storing means for storing an inference rule defined by the data structure of meta information about the content data that is transmitted; and

transmitting means for transmitting the meta information, the meta information schema, the inference rule, and the content data through a transmission path when the inference rule ~~is~~ and the meta information schema are not stored in a receiving apparatus, and transmitting only the ~~inference rule~~ meta information and the content data when the inference rule ~~is~~ and the meta information schema are stored in the receiving apparatus,

wherein the meta information schema includes the identifier data and attribute names of the content,

wherein the meta information includes the identifier data, the attribute names and description data corresponding to each attribute name of the content.

2. (Currently Amended) A transmitting apparatus for providing digital content, comprising:

meta information storing means for storing meta information about content data that is transmitted;

identifier data storing means for storing identifier data associated with a particular portion of the content data that is adapted to distinguish a segment of content data;

meta information schema storing means for storing a meta information schema that defines the data structure of meta information about the content data according to the content data that is transmitted;

transmitting means for transmitting the meta information, the meta information schema, and the content data through a transmission path when ~~the~~ an inference rule and the meta information schema are ~~is~~ not stored in a receiving apparatus, and transmitting only the meta information ~~inference rule~~ and the content data when the inference rule and the meta information schema are ~~is~~ stored in the receiving apparatus;

communication controlling means for communicating with a receiving apparatus; and

changing means for changing the structure of the meta information schema that has been stored in said meta information schema storing means and the meta information that has been stored in said meta information storing means corresponding to content data that has been received through said communication controlling means,

wherein the meta information schema includes the identifier data and attribute names of the content,

wherein the meta information includes the identifier data, the attribute names and description data corresponding to each attribute name of the content.

3. (Currently Amended) A transmitting apparatus for providing digital content, comprising:

meta information storing means for storing meta information about content data that is transmitted;

identifier data storing means for storing identifier data associated with a particular portion of the content data that is adapted to distinguish a segment of content data;

meta information schema storing means for storing a meta information schema that defines the data structure of meta information about the content data according to the content data that is transmitted;

inference rule storing means for storing an inference rule defined by the data structure of meta information about the content data that is transmitted;

transmitting means for transmitting the meta information, the inference rule, and the content data through a transmission path when the inference rule is not stored in a receiving apparatus, and transmitting only the ~~inference rule~~ meta information and the content data when the inference rule is stored in the receiving apparatus;

communication controlling means for communicating with a receiving apparatus; and

changing means for changing the inference rule that has been stored in said inference rule storing means corresponding to content data that has been received through said communication controlling means,

wherein the meta information schema includes the identifier data and attribute names of the content,

wherein the meta information includes the identifier data, the attribute names and description data corresponding to each attribute name of the content.

4. (Previously Presented) The transmitting apparatus as set forth in claim 1, further comprising:

converting means for converting the format of the meta information into a transmission format.

5. (Previously Presented) The transmitting apparatus as set forth in claim 2,

wherein content data that has been received through said communication controlling apparatus is data that represents a use history of meta information of the receiving apparatus.

6. (Currently Amended) A receiving apparatus for receiving data for providing digital content, comprising:

receiving means for receiving at least meta information and content data through a transmission path when ~~the~~ an inference rule is not stored in the receiving apparatus, and

receiving only the ~~inference rule~~ meta information and the content data when the inference rule is stored in the receiving apparatus,

wherein the receiving means receives identifier data associated with a particular portion of the content data that is adapted to distinguish a segment of content data;

meta information schema storing means for storing a meta information schema;

profile operating means for operating a selection criterion for selecting meta information corresponding to the meta information schema;

user profile storing means for storing a user profile generated by said profile operating means;

meta information filtering means for selecting and receiving meta information corresponding to the user profile;

meta information storing means for storing meta information that has been selected and received;

meta information operating means for searching and/or browsing meta information;

inference rule storing means for storing ~~an~~ the inference rule defined by the data structure of meta information;

data storing means for receiving and storing data of contents represented by the meta information that has been selected; and

a data operating portion for operating data that has been stored in said data storing means,

wherein the meta information schema includes the identifier data and attribute names of the content,

wherein the meta information includes the identifier data, the attribute names and description data corresponding to each attribute name of the content.

7. (Currently Amended) A receiving apparatus for receiving data for providing digital content data, comprising:

receiving means for receiving at least meta information and the content data through a transmission path and receiving identifier data associated with a particular portion of the content data that is adapted to distinguish a segment of content data when ~~the~~ an inference rule is not stored in the receiving apparatus, and receiving only the ~~inference rule~~ meta information, the identifier data and the content data when the inference rule is stored in the receiving apparatus;

meta information schema storing means for storing a meta information schema that defines the data structure of meta information;

profile operating means for operating a selection criterion for selecting meta information corresponding to the meta information schema;

user profile storing means for storing a user profile generated by said profile operating means;

meta information filtering means for selecting and receiving meta information corresponding to the user profile;

meta information storing means for storing meta information that has been selected and received;

meta information operating means for searching and/or browsing meta information;

inference rule storing means for storing ~~an~~ the inference rule about the data structure of meta information;

changing means for changing the structure of the meta information schema that has been stored in said meta information schema storing means and the meta information that has been stored in said meta information storing means corresponding to the user profile that has been stored in said user profile storing means and to the inference rule that has been stored in said inference rule storing means;

data storing means for receiving and storing data of contents represented by the selected meta information; and

a data operating portion for operating data that has been stored in said data storing means,

wherein the meta information schema includes the identifier data and attribute names of the content,

wherein the meta information includes the identifier data, the attribute names and description data corresponding to each attribute name of the content.

8. (Original) The receiving apparatus as set forth in claim 7,

wherein said changing means changes the meta information schema that has been stored in said meta information schema storing means and the meta information that has been stored in said meta information storing means corresponding to a use history of meta information of a user.

9. (Original) The receiving apparatus as set forth in claim 7,

wherein said changing means changes a meta information schema and received meta information corresponding to a user's setup and stores the changed meta information schema and the changed meta information to said meta information schema storing means and said meta information storing means, respectively.

10. (Currently Amended) A transmitting and receiving apparatus having a transmitting apparatus for providing digital content and a receiving apparatus for receiving digital content,

wherein the transmitting apparatus comprises:

meta information storing means for storing meta information about content data that is transmitted;

meta information schema storing means for storing a meta information schema that defines the data structure of meta information about content data according to the content data that is transmitted;

inference rule storing means for storing an inference rule defined by the data structure of meta information about content data that is transmitted; and

transmitting means for transmitting the meta information, the meta information schema, the inference rule, and content data through a transmission path when the inference rule ~~is~~ and the meta information schema are not stored in a receiving apparatus, and transmitting only the ~~inference rule~~ meta information and the content data when the inference rule ~~is~~ and the meta information schema are stored in the receiving apparatus, and

wherein the receiving apparatus comprises:

receiving means for receiving the meta information, the meta information schema, the inference rule, identifier data associated with a particular portion of the content data that is adapted to distinguish a segment of content data, and content data through a transmission path when the inference rule and the meta information schema are ~~is~~ not stored in the receiving apparatus, and receiving only the ~~inference rule~~ meta information, the identifier data and the content data when the inference rule and the meta information schema are ~~is~~ stored in the receiving apparatus;

meta information schema storing means for storing the received meta information schema;

profile operating means for operating a selection criterion for selecting meta information corresponding to the meta information schema;

user profile storing means for storing a user profile generated by said profile operating means;

meta information filtering means for selecting and receiving meta information corresponding to the user profile;

meta information storing means for storing the meta information that has been selected and received;

meta information operating means for searching and/or browsing meta information;

inference rule storing means for storing ~~an~~ the inference rule that has been received;

data storing means for receiving and storing data of content that is represented by the selected meta information; and

a data operating portion for operating data that has been stored in said data storing means;

wherein the meta information schema includes the identifier data and attribute names of the content,

wherein the meta information includes the identifier data, the attribute names and description data corresponding to each attribute name of the content.

11. (Currently Amended) A transmitting and receiving apparatus having a transmitting apparatus for providing digital content and a receiving apparatus for receiving digital content,

wherein the transmitting apparatus comprises:

meta information storing means for storing meta information about content data that is transmitted;

meta information schema storing means for storing a meta information schema that defines the data structure of meta information about content data according to the content data that is transmitted;

transmitting means for transmitting the meta information, the meta information schema, and content data through a transmission path when an inference rule and the meta information schema are ~~is~~ not stored in the receiving apparatus, and transmitting only the ~~inference rule~~ meta information and the content data when the inference rule and the meta information schema are ~~is~~ stored in the receiving apparatus;

communication controlling means for communicating with the receiving apparatus; and

changing means for changing the structure of the meta information schema that has been stored in said meta information storing means and the meta information that has been stored in said meta information storing means corresponding to content data that has been received through said communication controlling means, and

wherein the receiving apparatus comprises:

receiving means for receiving the meta information, the meta information schema, identifier data associated with a particular portion of the content data that is adapted to distinguish a segment of content data, and content data through a transmission path;

meta information schema storing means for storing the meta information schema that has been received;

profile operating means for operating a selection criterion for selecting meta information corresponding to the meta information schema;

user profile storing means for storing a user profile generated by said profile operating means;

meta information filtering means for selecting and receiving meta information corresponding to the user profile;

meta information storing means for storing meta information that has been selected and received;

meta information operating means for searching and/or browsing meta information;

data storing means for receiving and storing data of content represented by the meta information that has been selected;

a data operating portion for operating data that has been stored in said data storing means; and communication controlling means for transmitting data to the transmitting apparatus,

wherein the meta information schema includes the identifier data and attribute names of the content,

wherein the meta information includes the identifier data, the attribute names and description data corresponding to each attribute name of the content.

12. (Currently Amended) A transmitting and receiving apparatus having a transmitting apparatus for providing digital content and a receiving apparatus for receiving digital content,

wherein the transmitting apparatus comprises:

meta information storing means for storing meta information about content data according to the content data that is transmitted;

meta information storing means for storing a meta information schema that defines the data structure of meta information about content data that is transmitted;

inference rule storing means for storing an inference rule defined by the data structure of meta information about content data that is transmitted;

transmitting means for transmitting the meta information, the meta information schema, the inference rule, and content data through a transmission path when the inference rule and the meta information schema are ~~is~~ not stored in the receiving apparatus, and transmitting only the ~~inference rule~~ meta information and the content data when the inference rule and the meta information schema are ~~is~~ stored in the receiving apparatus

communication controlling means for communicating with the receiving apparatus; and

changing means for changing the inference rule that has been stored in said inference rule storing means corresponding to content data that has been received through said communication controlling means, and

wherein the receiving apparatus comprises:

receiving means for receiving the meta information, the meta information schema, the inference rule, identifier data associated with a particular portion of the content data that is adapted to distinguish a segment of content data and content data through a transmission path;

meta information schema storing means for storing the meta information schema that has been received;

profile operating means for operating a selection criterion for selecting meta information corresponding to the meta information schema;

user profile storing means for storing a user profile generated by said profile operating means;

meta information filtering means for selecting and receiving meta information corresponding to the user profile;

meta information storing means for storing the meta information that has been selected and received;

meta information operating means for searching and/or browsing meta information;

inference rule storing means for storing the inference rule that has been received;

data storing means for receiving and storing data of content represented by the meta information that has been selected;

a data operating portion for operating data that has been stored in said data storing means; and

communication controlling means for transmitting content data to the transmitting apparatus,

wherein the meta information schema includes the identifier data and attribute names of the content,

wherein the meta information includes the identifier data, the attribute names and description data corresponding to each attribute name of the content.

13. (Currently Amended) A transmitting and receiving apparatus having a transmitting apparatus for providing digital content and a receiving apparatus for receiving digital content,

wherein the transmitting apparatus comprises:

meta information storing means for storing meta information about content data according to the content data that is transmitted;

meta information schema storing means for storing a meta information schema that defines the data structure of meta information about content data that is transmitted;

inference rule storing means for storing an inference rule about the data structure of meta information about content data that is transmitted; and

transmitting means for transmitting the meta information, the meta information schema, the inference rule, and content data through a transmission path when the inference rule

and the meta information schema are ~~is~~ not stored in the receiving apparatus, and transmitting only the ~~inference rule~~ meta information and the content data when the inference rule and the meta information schema are ~~is~~ stored in the receiving apparatus, and

wherein the receiving apparatus comprises:

receiving means for receiving the meta information, the meta information schema, the inference rule, identifier data associated with a particular portion of the content data that is adapted to distinguish a segment of content data and content data through a transmission path;

meta information schema storing means for storing the meta information schema that has been received;

profile operating means for operating a selection criterion for selecting meta information corresponding to the meta information schema;

user profile storing means for storing a user profile generated by said profile operating means;

meta information filtering means for selecting and receiving meta information corresponding to the user profile;

meta information storing means for storing the meta information that has been selected and received;

meta information operating means for searching and/or browsing meta information;

inference rule storing means for storing an inference rule;

changing means for changing the structure of the meta information schema that has been stored in said meta information schema storing means and the meta information that has been stored in said meta information storing means corresponding to the user profile that has

been stored in said user profile storing means and to the inference rule that has been stored in said inference rule storing means;

data storing means for receiving and storing data of contents represented by the meta information that has been selected; and

a data operating portion for operating data stored in said data storing means,

wherein the meta information schema includes the identifier data and attribute names of the content,

wherein the meta information includes the identifier data, the attribute names and description data corresponding to each attribute name of the content.

14. (Currently Amended) A transmitting method for providing digital content, comprising the steps of:

when meta information about content data that is transmitted,

transmitting a meta information schema that defines the data structure of the meta information, identifier data associated with a particular portion of the content data that is adapted to distinguish a segment of content data and content data ~~are transmitted~~ through a transmission path when an inference rule and the meta information schema are not stored in a receiving apparatus, and transmitting only the identifier data and the content data when the inference rule and the meta information schema are stored in the receiving apparatus, and

changing the structure of the meta information schema and the meta information corresponding to data that has been received from a receiving apparatus and transmitting the changed data,

wherein the meta information schema includes the identifier data and attribute names of the content,

wherein the meta information includes the identifier data, the attribute names and description data corresponding to each attribute name of the content.

15. (Currently Amended) A transmitting method for providing digital content, comprising the steps of:

when meta information about content data that is transmitted,

transmitting a meta information schema that defines the data structure of the meta information, an inference rule about the data structure of the meta information, and content data through a transmission path, including identifier data associated with a particular portion of the content data that is adapted to distinguish a segment of content data when the meta information schema and the inference rule ~~is~~ are not stored in a receiving apparatus, and transmitting only the ~~inference rule~~ meta information, the identifier data and the content data when the inference rule and the meta information schema are ~~is~~ stored in the receiving apparatus,

changing the inference rule corresponding to content data that has been received from a receiving apparatus and transmitting the changed data,

wherein the meta information schema includes the identifier data and attribute names of the content,

wherein the meta information includes the identifier data, the attribute names and description data corresponding to each attribute name of the content.

16. (Previously Presented) The transmitting method as set forth in claim 14, further comprising the step of:

receiving a meta information use history from the receiving apparatus and transmitting a meta information schema, meta information, and an inference rule that have been changed so that they have respective data structures corresponding to the meta information use history.

17. (Currently Amended) A receiving method for receiving data for providing digital content, comprising the steps of:

storing a meta information schema that defines the data structure of meta information;

storing identifier data associated with a particular portion of the content data that is adapted to distinguish a segment of content data;

storing at least meta information that has been selected and received when an inference rule and meta information schema are ~~is~~ not stored in the receiving apparatus, and storing only the ~~inference rule~~ meta information and the content data when the inference rule is stored in the receiving apparatus;

searching and/or browsing meta information; and

changing the structure of the meta information schema and the meta information that has been stored corresponding to a user profile and an inference rule;

wherein the meta information schema includes the identifier data and attribute names of the content;

wherein the meta information includes the identifier data, the attribute names and description data corresponding to each attribute name of the content.

18. (Currently Amended) A transmitting and receiving method for providing digital content and receiving digital content, comprising the steps of:

transmitting meta information about content data that is transmitted, a meta information schema that defines the data structure of the meta information, identifier data associated with a particular portion of the content data that is adapted to distinguish a segment of content data, and content data through a transmission path when the meta information schema and the inference rule ~~is~~ are not stored in a receiving apparatus, and transmitting only the ~~inference rule~~ meta information and the content data when the inference rule and the meta information schema ~~is~~ are stored in the receiving apparatus;

changing the structure of the meta information schema that is transmitted and the meta information corresponding to content data that has been received from a receiving apparatus;

storing a meta information schema that defines the data structure of the meta information that has been received on a receiving side;

storing the meta information that has been selected and received; and

searching and/or browsing the meta information,

wherein the meta information schema includes the identifier data and attribute names of the content,

wherein the meta information includes the identifier data, the attribute names and description data corresponding to each attribute name of the content.

19. (Currently Amended) A transmitting and receiving method for providing digital content and receiving digital content, comprising the steps of:

transmitting meta information about content data that is transmitted, a meta information schema that defines the data structure of the meta information, an inference rule, identifier data associated with a particular portion of the content data that is adapted to distinguish a segment of content data, and content data through a transmission path when the meta information schema and the inference rule ~~is~~ are not stored in a receiving apparatus, and transmitting only the ~~inference rule~~ meta information and the content data when the inference rule and the meta information schema are ~~is~~ stored in the receiving apparatus;

changing the inference rule that is transmitted corresponding to data that has been received from a receiving apparatus;

storing a meta information schema that defines the data structure of the meta information that has been received on a receiving side;

storing the meta information that has been selected and received; and

searching and/or browsing the meta information,

wherein the meta information schema includes the identifier data and attribute names of the content,

wherein the meta information includes the identifier data, the attribute names and description data corresponding to each attribute name of the content.

20. (Currently Amended) A transmitting and receiving method for providing digital content and receiving digital content, comprising the steps of:

transmitting meta information about content data , a meta information schema that defines the data structure of the meta information, an inference rule about the data structure of the meta information, identifier data associated with a particular portion of the content data that is adapted to distinguish a segment of content data, and content data through a transmission path when the inference rule and the meta information schema are ~~is~~ not stored in a receiving apparatus, and transmitting only the ~~inference rule~~ meta information and the content data when the inference rule and the meta information schema are ~~is~~ stored in the receiving apparatus;

storing the meta information schema that defines the data structure of the meta information that has been received on a receiving side;

storing the meta information that has been selected and received; and

changing the structure of the meta information schema and the meta information that has been stored corresponding to a user profile and the inference rule,

wherein the meta information schema includes the identifier data and attribute names of the content,

wherein the meta information includes the identifier data, the attribute names and description data corresponding to each attribute name of the content.

21. (Previously Presented) The transmitting apparatus as set forth in claim 2, further comprising:

converting means for converting the format of the meta information into a transmission format.

22. (Previously Presented) The transmitting apparatus as set forth in claim 3, further comprising:

converting means for converting the format of the meta information into a transmission format.

23. (Previously Presented) The transmitting apparatus as set forth in claim 3, wherein data that has been received through said communication controlling apparatus is data that represents a use history of meta information of the receiving apparatus.

24. (Previously Presented) The transmitting method as set forth in claim 15, further comprising the step of:

receiving a meta information use history from the receiving apparatus and transmitting a meta information schema, meta information, and an inference rule that have been changed so that they have respective data structures corresponding to the meta information use history.